



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534


Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002942  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using  
good laboratory practices and in accordance with federal or state  
approved methodologies.

  
\_\_\_\_\_  
Analytical Supervisor

**Lab-Sample Number:** K00002942001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 10/01/2009 11:40  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.42 pH Units  
**Chlorine, residual:**  
**Conductivity:** 61 uMHO  
**Temperature:** 18.27  
**Dissolved Oxygen:** 9.77 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/02/2009				M Pattanayek	10/2/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	780	µg/L	2.9	10	A Wilson	10/6/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	105	µg/L	6.4	10	M Pattanayek	10/2/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/2/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/2/2009
Barium	27	µg/L	2.5	5	M Pattanayek	10/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/2/2009
Cobalt	0.39J	µg/L	0.04	1	M Pattanayek	10/2/2009
Copper	0.45J	µg/L	0.38	1	M Pattanayek	10/2/2009
Lead	0.22J	µg/L	0.10	1	M Pattanayek	10/2/2009
Manganese	120	µg/L	0.42	1	M Pattanayek	10/2/2009
Nickel	1.3	µg/L	0.25	1	M Pattanayek	10/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/2/2009
Thallium	0.069J	µg/L	0.03	1	M Pattanayek	10/2/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/2/2009
Zinc	1.9J	µg/L	1.9	5	M Pattanayek	10/2/2009

**Lab-Sample Number:** K00002942001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 10/01/2009 11:40  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.42 pH Units  
**Chlorine, residual:**  
**Conductivity:** 61 uMHO  
**Temperature:** 18.27  
**Dissolved Oxygen:** 9.77 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/5/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00002942002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River 2.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 10/01/2009 10:01  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**

**pH:** 7.74 pH Units  
**Chlorine, residual:**  
**Conductivity:** 62 uMHO  
**Temperature:** 18.82  
**Dissolved Oxygen:** 8.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/02/2009				M Pattanayek	10/2/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	620	µg/L	2.9	10	A Wilson	10/6/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	650	µg/L	6.4	10	M Pattanayek	10/2/2009
Antimony	0.40J	µg/L	0.33	1	M Pattanayek	10/2/2009
Arsenic	7.5	µg/L	0.93	5	M Pattanayek	10/2/2009
Barium	51	µg/L	2.5	5	M Pattanayek	10/2/2009
Beryllium	0.19J	µg/L	0.11	1	M Pattanayek	10/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/2/2009
Chromium	2.0J	µg/L	2.0	5	M Pattanayek	10/2/2009
Cobalt	0.64J	µg/L	0.04	1	M Pattanayek	10/2/2009
Copper	2.7	µg/L	0.38	1	M Pattanayek	10/2/2009
Lead	1.1	µg/L	0.10	1	M Pattanayek	10/2/2009
Manganese	52	µg/L	0.42	1	M Pattanayek	10/2/2009
Nickel	2.0	µg/L	0.25	1	M Pattanayek	10/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/2/2009
Thallium	0.14J	µg/L	0.03	1	M Pattanayek	10/2/2009
Vanadium	5.4	µg/L	3.4	5	M Pattanayek	10/2/2009
Zinc	4.4J	µg/L	1.9	5	M Pattanayek	10/2/2009

**Lab-Sample Number:** K00002942002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River 2.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 10/01/2009 10:01  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.74 pH Units  
**Chlorine, residual:**  
**Conductivity:** 62 uMHO  
**Temperature:** 18.82  
**Dissolved Oxygen:** 8.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/5/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00002942003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 10/01/2009 10:16  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.27 pH Units  
**Chlorine, residual:**  
**Conductivity:** 62 uMHO  
**Temperature:** 18.71  
**Dissolved Oxygen:** 8.31 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/02/2009				M Pattanayek	10/2/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	510	µg/L	2.9	10	A Wilson	10/6/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	410	µg/L	6.4	10	M Pattanayek	10/2/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/2/2009
Arsenic	3.3J	µg/L	0.93	5	M Pattanayek	10/2/2009
Barium	37	µg/L	2.5	5	M Pattanayek	10/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/2/2009
Cadmium	1.0	µg/L	0.41	1	M Pattanayek	10/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/2/2009
Cobalt	1.0	µg/L	0.04	1	M Pattanayek	10/2/2009
Copper	3.8	µg/L	0.38	1	M Pattanayek	10/2/2009
Lead	0.82J	µg/L	0.10	1	M Pattanayek	10/2/2009
Manganese	56	µg/L	0.42	1	M Pattanayek	10/2/2009
Nickel	4.6	µg/L	0.25	1	M Pattanayek	10/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/2/2009
Thallium	0.065J	µg/L	0.03	1	M Pattanayek	10/2/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/2/2009
Zinc	8.5	µg/L	1.9	5	M Pattanayek	10/2/2009

**Lab-Sample Number:** K00002942003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 10/01/2009 10:16  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**

**pH:** 7.27 pH Units  
**Chlorine, residual:**  
**Conductivity:** 62 uMHO  
**Temperature:** 18.71  
**Dissolved Oxygen:** 8.31 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1					
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE	
Mercury	U	µg/L	0.029	0.2	A Bass	10/5/2009	

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002942004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 10/01/2009 10:26  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.18 pH Units  
**Chlorine, residual:**  
**Conductivity:** 64 uMHO  
**Temperature:** 18.76  
**Dissolved Oxygen:** 8.24 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/02/2009				M Pattanayek	10/2/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	460	µg/L	2.9	10	A Wilson	10/6/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	400	µg/L	6.4	10	M Pattanayek	10/2/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/2/2009
Arsenic	3.4J	µg/L	0.93	5	M Pattanayek	10/2/2009
Barium	39	µg/L	2.5	5	M Pattanayek	10/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/2/2009
Cobalt	0.41J	µg/L	0.04	1	M Pattanayek	10/2/2009
Copper	2.3	µg/L	0.38	1	M Pattanayek	10/2/2009
Lead	0.66J	µg/L	0.10	1	M Pattanayek	10/2/2009
Manganese	47	µg/L	0.42	1	M Pattanayek	10/2/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	10/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/2/2009
Thallium	0.060J	µg/L	0.03	1	M Pattanayek	10/2/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/2/2009
Zinc	2.6J	µg/L	1.9	5	M Pattanayek	10/2/2009



Lab-Sample Number: K00002942004  
Project Name: TVA-Ash Spill  
Sample Description: Emory River mile 1.7  
Sampler Project Name: TVA Ash Spill  
Project Site No.: 3  
Station No.: EMORY001.7RO  
Date/Time Collected: 10/01/2009 10:26  
Sampler's Name: Geoff Klein  
County: ROANE - 73  
Sample Matrix: Water  
EFO: Knoxville  
Sampling Agency: TDEC-WPC  
Billing Code: 327.34-20  
Send Report To: TDEC-WPC  
Agency Invoiced: TDEC-WPC  
Priority Date:  
Date/Time Received: 10/01/2009 12:40  
Received By: S Staller

**Field Determinations**

pH: 7.18 pH Units  
Chlorine, residual:  
Conductivity: 64 uMHO  
Temperature: 18.76  
Dissolved Oxygen: 8.24 mg/L  
Other:  
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/5/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002942005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 10/01/2009 10:41  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.23 pH Units  
**Chlorine, residual:**  
**Conductivity:** 77 uMHO  
**Temperature:** 19.10  
**Dissolved Oxygen:** 8.17 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/02/2009				M Pattanayek	10/2/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	430	µg/L	2.9	10	A Wilson	10/6/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	350	µg/L	6.4	10	M Pattanayek	10/2/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/2/2009
Arsenic	2.8J	µg/L	0.93	5	M Pattanayek	10/2/2009
Barium	40	µg/L	2.5	5	M Pattanayek	10/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/2/2009
Cobalt	0.38J	µg/L	0.04	1	M Pattanayek	10/2/2009
Copper	2.4	µg/L	0.38	1	M Pattanayek	10/2/2009
Lead	0.65J	µg/L	0.10	1	M Pattanayek	10/2/2009
Manganese	51	µg/L	0.42	1	M Pattanayek	10/2/2009
Nickel	1.5	µg/L	0.25	1	M Pattanayek	10/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/2/2009
Thallium	0.053J	µg/L	0.03	1	M Pattanayek	10/2/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/2/2009
Zinc	2.7J	µg/L	1.9	5	M Pattanayek	10/2/2009

**Lab-Sample Number:** K00002942005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 10/01/2009 10:41  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.23 pH Units  
**Chlorine, residual:**  
**Conductivity:** 77 uMHO  
**Temperature:** 19.10  
**Dissolved Oxygen:** 8.17 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/5/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

**Lab-Sample Number:** K00002942006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 10/01/2009 11:05  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.59 pH Units  
**Chlorine, residual:**  
**Conductivity:** 182 uMHO  
**Temperature:** 18.74  
**Dissolved Oxygen:** 7.96 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/02/2009				M Pattanayek	10/2/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	230	µg/L	2.9	10	A Wilson	10/6/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	180	µg/L	6.4	10	M Pattanayek	10/2/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/2/2009
Arsenic	1.2J	µg/L	0.93	5	M Pattanayek	10/2/2009
Barium	35	µg/L	2.5	5	M Pattanayek	10/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/2/2009
Cobalt	0.21J	µg/L	0.04	1	M Pattanayek	10/2/2009
Copper	1.9	µg/L	0.38	1	M Pattanayek	10/2/2009
Lead	0.30J	µg/L	0.10	1	M Pattanayek	10/2/2009
Manganese	36	µg/L	0.42	1	M Pattanayek	10/2/2009
Nickel	1.1	µg/L	0.25	1	M Pattanayek	10/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/2/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/2/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/2/2009
Zinc	2.2J	µg/L	1.9	5	M Pattanayek	10/2/2009

**Lab-Sample Number:** K00002942006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 10/01/2009 11:05  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.59 pH Units  
**Chlorine, residual:**  
**Conductivity:** 182 uMHO  
**Temperature:** 18.74  
**Dissolved Oxygen:** 7.96 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/5/2009

J - Estimated value between MDL and MQL  
 MDL - Method Detection Limit  
 MQL - Method Quantitation Limit  
 U - Undetected

**Lab-Sample Number:** K00002942007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 10/01/2009 11:16  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.30 pH Units  
**Chlorine, residual:**  
**Conductivity:** 96 uMHO  
**Temperature:** 21.22  
**Dissolved Oxygen:** 8.04 mg/L  
**Other:**  
**Flow:** CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/02/2009				M Pattanayek	10/2/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	460	µg/L	2.9	10	A Wilson	10/6/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	400	µg/L	6.4	10	M Pattanayek	10/2/2009
Antimony	0.88J	µg/L	0.33	1	M Pattanayek	10/2/2009
Arsenic	4.6J	µg/L	0.93	5	M Pattanayek	10/2/2009
Barium	47	µg/L	2.5	5	M Pattanayek	10/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/2/2009
Cobalt	0.42J	µg/L	0.04	1	M Pattanayek	10/2/2009
Copper	4.5	µg/L	0.38	1	M Pattanayek	10/2/2009
Lead	0.67J	µg/L	0.10	1	M Pattanayek	10/2/2009
Manganese	75	µg/L	0.42	1	M Pattanayek	10/2/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	10/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/2/2009
Thallium	0.14J	µg/L	0.03	1	M Pattanayek	10/2/2009
Vanadium	4.9J	µg/L	3.4	5	M Pattanayek	10/2/2009
Zinc	6.1	µg/L	1.9	5	M Pattanayek	10/2/2009

**Lab-Sample Number:** K00002942007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 10/01/2009 11:16  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.30 pH Units  
**Chlorine, residual:**  
**Conductivity:** 96 uMHO  
**Temperature:** 21.22  
**Dissolved Oxygen:** 8.04 mg/L  
**Other:**  
**Flow:** CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.029	0.2	A Bass	10/5/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected

<b>Lab-Sample Number:</b>	K00002942008	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.61 pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley R	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA Ash Spill	<b>Conductivity:</b>	263 uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	18.39
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	7.61 mg/L
<b>Date/Time Collected:</b>	10/01/2009 10:53	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	10/01/2009 12:40		
<b>Received By:</b>	S Staller		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	10/02/2009				M Pattanayek	10/2/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	110	µg/L	2.9	10	A Wilson	10/6/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	81	µg/L	6.4	10	M Pattanayek	10/2/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	10/2/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	10/2/2009
Barium	34	µg/L	2.5	5	M Pattanayek	10/2/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	10/2/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	10/2/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	10/2/2009
Cobalt	0.16J	µg/L	0.04	1	M Pattanayek	10/2/2009
Copper	1.4	µg/L	0.38	1	M Pattanayek	10/2/2009
Lead	0.21J	µg/L	0.10	1	M Pattanayek	10/2/2009
Manganese	38	µg/L	0.42	1	M Pattanayek	10/2/2009
Nickel	1.0	µg/L	0.25	1	M Pattanayek	10/2/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	10/2/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	10/2/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	10/2/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	10/2/2009
Zinc	U	µg/L	1.9	5	M Pattanayek	10/2/2009



<b>Lab-Sample Number:</b>	K00002942008	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.61      pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley R	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA Ash Spill	<b>Conductivity:</b>	263      uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	18.39
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	7.61      mg/L
<b>Date/Time Collected:</b>	10/01/2009    10:53	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	10/01/2009    12:40		
<b>Received By:</b>	S Staller		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.06J	µg/L	0.029	0.2	A Bass	10/5/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected



**STATE OF TENNESSEE  
DEPARTMENT OF HEALTH  
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL  
Lab Services - Jackson Regional Lab  
Jackson, TN 38301  
731-426-0686

TDH: Lab Services KRL  
Lab Services - Knoxville Regional Lab  
Knoxville, TN 37920  
865-549-5201

TDH: Lab Services NCL  
Lab Services - Nashville Central Lab  
Nashville, TN 37243  
615-262-6300

**Sent To:** Greg Denton  
TDEC-WPC  
6th Floor, L & C Tower Annex  
401 Church Street  
Nashville, TN 37243-1534

Michael Atchley  
TDEC-WPC  
Knoxville FO  
3711 Middlebrook Pike  
Knoxville, TN 37921

**Lab ID:** K00002942  
Knoxville Regional Laboratory

**Sampling Agency:** TDEC: Division of Water Pollution Control

**Billing Code:** 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

  
Analytical Supervisor

**Lab-Sample Number:** K00002942001  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 12.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 1  
**Station No.:** EMORY012.1RO  
**Date/Time Collected:** 10/01/2009 11:40  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.42 pH Units  
**Chlorine, residual:**  
**Conductivity:** 61 uMHO  
**Temperature:** 18.27  
**Dissolved Oxygen:** 9.77 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	16	mg/L	3.8	10	S Burchfield	10/5/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	19	mg/L	0.7	1	P Leathers	10/5/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/2/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/2/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002942002  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River 2.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2  
**Station No.:** EMORY002.1RO  
**Date/Time Collected:** 10/01/2009 10:01  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.74 pH Units  
**Chlorine, residual:**  
**Conductivity:** 62 uMHO  
**Temperature:** 18.82  
**Dissolved Oxygen:** 8.68 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	18	mg/L	3.8	10	S Burchfield	10/5/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	18	mg/L	0.7	1	P Leathers	10/5/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	P Leathers	10/2/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	77	mg/L	10	10	A Peebles	10/2/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002942003  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.9 at underwater weir  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 2B  
**Station No.:** EMORY001.9RO  
**Date/Time Collected:** 10/01/2009 10:16  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.27 pH Units  
**Chlorine, residual:**  
**Conductivity:** 62 uMHO  
**Temperature:** 18.71  
**Dissolved Oxygen:** 8.31 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	18	mg/L	3.8	10	S Burchfield	10/5/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	18	mg/L	0.7	1	P Leathers	10/5/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/2/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	23	mg/L	10	10	A Peebles	10/2/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002942004  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 1.7  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 3  
**Station No.:** EMORY001.7RO  
**Date/Time Collected:** 10/01/2009 10:26  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.18 pH Units  
**Chlorine, residual:**  
**Conductivity:** 64 uMHO  
**Temperature:** 18.76  
**Dissolved Oxygen:** 8.24 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	36	mg/L	3.8	10	S Burchfield	10/5/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	32	mg/L	0.7	1	P Leathers	10/5/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	P Leathers	10/2/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	22	mg/L	10	10	A Peebles	10/2/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002942005  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Emory River mile 0.1  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 4  
**Station No.:** EMORY000.1RO  
**Date/Time Collected:** 10/01/2009 10:41  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.23 pH Units  
**Chlorine, residual:**  
**Conductivity:** 77 uMHO  
**Temperature:** 19.10  
**Dissolved Oxygen:** 8.17 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	40	mg/L	3.8	10	S Burchfield	10/5/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	38	mg/L	0.7	1	P Leathers	10/5/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.6	ml/L	0.10	0.10	P Leathers	10/2/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	170	mg/L	10	10	A Peoples	10/2/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

**Lab-Sample Number:** K00002942006  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River mile 2.3  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5  
**Station No.:** CLINC002.3RO  
**Date/Time Collected:** 10/01/2009 11:05  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.59 pH Units  
**Chlorine, residual:**  
**Conductivity:** 182 uMHO  
**Temperature:** 18.74  
**Dissolved Oxygen:** 7.96 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	76	mg/L	3.8	10	S Burchfield	10/5/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	64	mg/L	0.7	1	P Leathers	10/5/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/2/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	10/2/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**



**Lab-Sample Number:** K00002942007  
**Project Name:** TVA-Ash Spill  
**Sample Description:** Clinch River TVA Discharge Point  
**Sampler Project Name:** TVA Ash Spill  
**Project Site No.:** 5A  
**Station No.:** KingAshOutF2  
**Date/Time Collected:** 10/01/2009 11:16  
**Sampler's Name:** Geoff Klein  
**County:** ROANE - 73  
**Sample Matrix:** Water  
**EFO:** Knoxville  
**Sampling Agency:** TDEC-WPC  
**Billing Code:** 327.34-20  
**Send Report To:** TDEC-WPC  
**Agency Invoiced:** TDEC-WPC  
**Priority Date:**  
**Date/Time Received:** 10/01/2009 12:40  
**Received By:** S Staller

**Field Determinations**  
**pH:** 7.30 pH Units  
**Chlorine, residual:**  
**Conductivity:** 96 uMHO  
**Temperature:** 21.22  
**Dissolved Oxygen:** 8.04 mg/L  
**Other:**  
**Flow:** CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	28	mg/L	3.8	10	S Burchfield	10/5/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	32	mg/L	0.7	1	P Leathers	10/5/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	0.1	ml/L	0.10	0.10	P Leathers	10/2/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	25	mg/L	10	10	A Peebles	10/2/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**

<b>Lab-Sample Number:</b>	K00002942008	<b>Field Determinations</b>	
<b>Project Name:</b>	TVA-Ash Spill	<b>pH:</b>	7.61 pH Units
<b>Sample Description:</b>	Clinch River mile 4.5 near Sugar Grove Valley R	<b>Chlorine, residual:</b>	
<b>Sampler Project Name:</b>	TVA Ash Spill	<b>Conductivity:</b>	263 uMHO
<b>Project Site No.:</b>	6	<b>Temperature:</b>	18.39
<b>Station No.:</b>	CLINC004.5RO	<b>Dissolved Oxygen:</b>	7.61 mg/L
<b>Date/Time Collected:</b>	10/01/2009 10:53	<b>Other:</b>	
<b>Sampler's Name:</b>	Geoff Klein	<b>Flow:</b>	CFS
<b>County:</b>	ROANE - 73		
<b>Sample Matrix:</b>	Water		
<b>EFO:</b>	Knoxville		
<b>Sampling Agency:</b>	TDEC-WPC		
<b>Billing Code:</b>	327.34-20		
<b>Send Report To:</b>	TDEC-WPC		
<b>Agency Invoiced:</b>	TDEC-WPC		
<b>Priority Date:</b>			
<b>Date/Time Received:</b>	10/01/2009 12:40		
<b>Received By:</b>	S Staller		

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	110	mg/L	3.8	10	S Burchfield	10/5/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	95	mg/L	0.7	1	P Leathers	10/5/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	10/2/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	11	mg/L	10	10	A Peebles	10/2/2009

**J - Estimated value between MDL and MQL**  
**MDL - Method Detection Limit**  
**MQL - Method Quantitation Limit**  
**U - Undetected**